

EXHIBIT 3

Highly Confidential

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION**

IN RE: CATHODE RAY TUBE (CRT)
ANTITRUST LITIGATION

This document relates to:
ALL INDIRECT PURCHASER ACTIONS

Master File No. 07-CV-5944-JST
MDL No. 1917

**JANET S. NETZ, PH.D REBUTTAL TO SUPPLEMENTAL EXPERT REPORT OF
MARGARET E. GUERIN-CALVERT AND EXPERT REPORT OF DONALD CLARKE**

April 27, 2022

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I. Introduction

A. Qualifications

I, Janet S. Netz, am a founding partner of applEcon, LLC. I have been a tenured Associate Professor of Economics at Purdue University and a Visiting Associate Professor at the University of Michigan. I received a B.A. (1986) from the University of California, Berkeley, cum laude, and an M.A. (1990) and Ph.D. (1992) from the University of Michigan, all in Economics. My doctoral fields of study were Industrial Organization – the study of firm interaction and market performance – and International Trade and Finance.

I have taught Industrial Organization at the undergraduate and doctoral level; Antitrust and Regulation at the undergraduate level; Microeconomic Theory at the undergraduate and master's level; and International Economics at the undergraduate and master's level. My research has focused on competitive interactions of firms and strategies firms can use to increase profits as well as the resulting impact on firms and the market. I have published in peer-reviewed scholarly journals and have presented my research at many conferences and seminars. I provide my academic employment and publication histories in my curriculum vitae, which is attached as Exhibit A.

I have testified at trial and by affidavit or declaration in both named plaintiff and class action matters related to antitrust, consumer protection, and business practices, especially with regard to the economic impact of conduct, for over fifteen years. I have specific knowledge of the CRT industry through my previous work in this matter, which includes the following filings:

1. Declaration of Janet S. Netz, Ph.D. in Support of Motion of Indirect-Purchaser Plaintiffs for Class Certification, October 1, 2012¹ (“Netz Class Cert Declaration”)
2. Rebuttal Declaration of Janet S. Netz, Ph.D. in Support of Motion of Indirect-Purchaser Plaintiffs for Class Certification, February 15, 2013² (“Netz Class Cert Rebuttal”)
3. Expert Report of Janet S. Netz, Ph.D., April 15, 2014³ (“Netz Expert Report”)
4. Rebuttal Expert Report of Janet S. Netz, Ph.D., September 26, 2014⁴ (“Netz Expert Rebuttal Report”)

¹ Netz, Janet S., 01 October 2012, Declaration of Janet S. Netz, Ph.D., In Support of Motion of Indirect-Purchaser Plaintiffs For Class Certification, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter “Netz Class Cert Declaration”).

² Netz, Janet S., 15 February 2013, Rebuttal Declaration of Janet S. Netz, Ph.D., in Support of Motion of Indirect-Purchaser Plaintiffs for Class Certification, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter “Netz Class Cert Rebuttal”).

³ Netz, Janet S., 15 April 2014, Expert Report of Janet S. Netz, Ph.D, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter “Netz Expert Report”).

I filed errata to my expert report on July 3, 2014. Netz, Janet S., 03 July 2014, Errata to the Expert Report of Janet S. Netz, Ph.D, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter “Netz Expert Report Errata”). When I reference my expert report, it is inclusive of the updated figures in my errata.

I provide a complete list of the cases on which I have testified and consulted in my curriculum vitae, which is attached as Exhibit A.

applEcon bills my work on this case at the rate of US\$800 per hour. My and applEcon's compensation is independent of my opinions or the outcome of the case.

B. My assignment

Plaintiffs' counsel asked me to evaluate the arguments made by Ms. Margaret E. Guerin-Calvert in her March 16, 2022 Supplemental Expert Report ("Guerin-Calvert Supplemental Report").⁵ Briefly, Irico's counsel asked Ms. Guerin-Calvert to make four assumptions and to assess their implications on my analyses and conclusions, including my damages estimates.⁶ Ms. Guerin-Calvert also relies on the opinions expressed in Professor Clarke's March 16, 2022 Expert Report ("Clarke Report").⁷ Ms. Guerin-Calvert also states that she has "reaffirm[ed] the conclusions and underlying analyses presented in [her] previous reports in this matter[.]"⁸ and has "reviewed the conclusions and underlying analyses presented in the expert reports that Professor Willig has previously submitted in his matter, considered and assessed the analyses detailed in his reports...and adopt[ed] his conclusions and the underlying analyses in full as reflecting my own expert opinion."⁹

I have evaluated the supplemental arguments made by Ms. Guerin-Calvert about my work based on Irico's counsel's four assumptions and find them unpersuasive in addressing my previous analyses and conclusions. I present my conclusions and reasoning in the remainder of this report.

I list the additional confidential and public documents I have relied upon in Exhibits B and C, respectively.

I have also reviewed Ms. Guerin-Calvert's previous reports¹⁰ and Professor Willig's previous reports,¹¹ which Ms. Guerin-Calvert has "adopted." In my Expert Rebuttal Report, I have already

⁴ Netz, Janet S., 26 September 2014, Rebuttal Expert Report of Janet S. Netz, Ph.D., In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Netz Expert Rebuttal Report").

⁵ Guerin-Calvert, Margaret E., 16 March 2022, Supplemental Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Guerin-Calvert Supplemental Report").

Ms. Guerin-Calvert filed errata to her Supplemental Report on March 21, 2022. Her errata updated damages numbers reported in her Supplemental Report. For purposes of this report, when I reference Ms. Guerin-Calvert's damages claims, it is with respect to the updated numbers in her errata.

⁶ Guerin-Calvert Supplemental Report, ¶8.

⁷ Clarke, Donald, 16 March 2022, Expert Report of Donald Clarke, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Clarke Expert Report").

⁸ Guerin-Calvert Supplemental Report, ¶13.

⁹ Guerin-Calvert Supplemental Report, ¶14, emphasis added.

¹⁰ See:

explained in detail why Defendants' experts' previous analyses and opinions – including those of Ms. Guerin-Calvert and Professor Willig – are flawed. If needed, I am prepared to explain at trial why the surrebuttal reports Ms. Guerin-Calvert and Professor Willig submitted after my Expert Rebuttal Report fail to rebut the reliability of my conclusions, including as they pertain to Irico.

C. Summary of my conclusions

The arguments in Ms. Guerin-Calvert's Supplemental Report are built on "assumptions" that Irico's counsel asked her to make. They are not based on new evidence. As such, they are essentially thought experiments designed by Irico's counsel. The assumptions regarding "liability" are legal assumptions outside the scope of my expertise. I do not have an opinion as to the merit of any legal assumptions. Instead, I evaluated Ms. Guerin-Calvert's arguments by accepting, as she did, Irico's counsel's requested assumptions and considered the conclusions Ms. Guerin-Calvert drew from these assumptions in light of the case evidence and economic principles.

In summary, after reviewing Ms. Guerin-Calvert's arguments, I conclude:

- My approach in estimating damages, consistent with my experience and my understanding of the experience of other expert economists in similar or analogous settings, was to calculate damages caused by the CRT cartel as a whole, rather than for individual conspirators and products. The assumptions that "IPPs cannot demonstrate that Irico participated in the alleged cartel with respect to either CDTs or CPTs prior to August 1998" and that "Irico did not produce any CPTs with a diameter larger than 29 inches during the class period" are irrelevant when estimating damages caused by the cartel to the class. Nonetheless, time-period and product adjustments to my damages estimate are arithmetic and can be accommodated by my methodology.
- The assumption that "price floors set by the Chinese government for at least some categories of CPTs during at least some portions of the class period represent a potential constraint on but-for pricing" is based on both legal and economic assumptions. I do not

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- Guerin-Calvert, Margaret E., 05 August 2014, Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).
 - Guerin-Calvert, Margaret E., 23 September 2014, Errata to The Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).
 - Guerin-Calvert, Margaret E., 06 November 2014, Expert Surrebuttal Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Guerin-Calvert Surrebuttal Report").

¹¹ See:

- Willig, Robert D., 05 August 2014, Expert Report of Robert D. Willig, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Willig Report").
- Willig, Robert D., 06 November 2014, Expert Surrebuttal Report of Robert D. Willig, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division) (Hereinafter "Willig Surrebuttal Report").

make conclusions on whether these price floors are legally binding or appropriate. I did review the Pricing Documents attached to Professor Clarke's report to inform the economic analysis of the implication of a price floor, assuming that these documents create a "price floor", a conclusion about which I do not offer an opinion. My reading of the documents, however, suggests that Professor Clarke and Ms. Guerin-Calvert have identified the wrong price floor. Ms. Guerin-Calvert's conclusions that implied but-for prices are below this possibly erroneous price floor do not hold when implied but-for prices are properly calculated to account for the shape of the CRT (flat versus round). Ms. Guerin-Calvert at best finds a single, questionable, instance (for 21-inch CPTs in 1999 Q2) where the but-for price implied by my damages model might be below the possibly erroneous price floor. This single observation represents less than 0.1% of the sales included during the damages period of my model and is one out of 850 CPT size-quarter observations.

- The assumption that "horizontal communications related to CPTs in which Irico allegedly participated were not directed at North American customers" does not rebut that Irico participated in the cartel or demonstrate that my damages estimates are unreliable. Applying economic principles to the complete body of evidence demonstrates that the cartel had the incentive and ability to raise the prices of CRTs consumed in North America and that the cartel did in fact raise the prices of CRTs consumed in North America.¹²

In the rest of this report, I discuss the reasons and reasoning underlying my conclusions.

II. The assumption that Irico did not participate in the cartel prior to August 1998 does not change my opinions on classwide damages

Ms. Guerin-Calvert "was asked to assume that IPPs cannot demonstrate that Irico participated in the alleged cartel with respect to either CDTs or CPTs prior to August 1998."¹³ She was furthermore asked to "assume that Irico is not liable for any damages allegedly incurred by the IPPs prior to August 1998."¹⁴

Irico has not produced evidence indicating that it did not participate in the cartel prior to August 1998. Cartel meeting notes indicate that Irico was participating in the ongoing cartel at least as of August 1998, and those notes do not suggest that Irico was a new entrant to the ongoing cartel.¹⁵ Moreover, I understand that plaintiffs' counsel recently found evidence in Irico's and BMCC's productions of Irico's meetings with other Chinese CRT makers prior to 1998.¹⁶

¹² Netz Expert Rebuttal Report.

¹³ Guerin-Calvert Supplemental Report, ¶17.

¹⁴ Guerin-Calvert Supplemental Report, ¶17.

¹⁵ Chunghwa Picture Tubes (Fuzhou), Yeh, Chung-Cheng (Alex), 11 August 1998, Mainland China CDT MAKER Contact Meeting [Certified Translation], CHU00030661 - CHU00030663, at 0661.01E.

¹⁶ 23 February 2022, Indirect Purchaser Plaintiffs' Objections and Responses to the Irico Defendants' Second Set of Interrogatories, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division), Response to Interrogatory No. 2.

I estimate damages to class members over the entire class period, March 1, 1995 through November 25, 2007, to be \$2.769 billion, including \$2.026 billion in CDT damages and \$743 million in CPT damages.¹⁷ I do not portion out damages to individual conspirators, nor does Ms. Guerin-Calvert.

As Ms. Guerin-Calvert demonstrated, my damages estimation method can easily accommodate different cartel periods depending on the Court's findings. Should Irco be found not legally liable for any cartel damages prior to August 1998, my adjusted damages estimate to class members for the period August 1, 1998 through November 25, 2007 would be \$1.621 billion, including \$1.136 billion in CDT damages and \$485 million in CPT damages.¹⁸

III. The assumption that Irco did not manufacture CPTs with a diameter larger than 29 inches from March 1, 1995 to November 25, 2007 does not change my opinions on classwide damages

Irco's counsel also asked Ms. Guerin-Calvert "to assume that Irco did not produce any CPTs with a diameter larger than 29 inches during the class period."¹⁹ Whether Irco produced CPTs larger than 29 inches during the class period is irrelevant to the calculation of damages when damages are calculated for the cartel as a whole.

As Ms. Guerin-Calvert demonstrated, my damages estimation method can easily exclude individual cartelized products depending on the Court's findings. CPTs larger than 29 inches in diameter account for \$161 million of my damages estimate, so my damages estimate would be reduced from \$2.769 billion to \$2.607 billion should the Court find Irco not liable for cartel damages arising from CPTs larger than 29 inches.²⁰

IV. Ms. Guerin-Calvert's analysis of the assumption that Irco was subject to a price "floor" is flawed and does not change my opinion that my damages model is economically sound

Ms. Guerin-Calvert was asked to assume that Irco and other Chinese manufacturers were required to price specific CPT products above a price floor set by the Chinese government.

Ms. Guerin-Calvert's analysis rests on eight Pricing Documents that Irco's expert, Professor Clarke, attaches to his report. Professor Clarke opines that "[t]he regulatory framework constituted by the Pricing Documents has the status of enforceable law in the Chinese legal system." He then lists what he refers to as price "floors."²¹

Ms. Guerin-Calvert purports to show that the but-for prices implied by my damages model are below the price floor in three instances. Based on her analysis, she concludes that "Dr. Netz's

¹⁷ Netz Expert Report Errata, Exhibit ER-81.

¹⁸ Guerin-Calvert, Margaret E., 21 March 2022, Errata to the Supplemental Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division), Table F-2R.

¹⁹ Guerin-Calvert Supplement Report, ¶22.

²⁰ Guerin-Calvert Supplemental Report, Table G-1.

²¹ Clarke Report, ¶24.

failure to account for these floors in her overcharge model potentially is likely yet another reason why her overcharge model is unreliable, particularly where the average but-for prices of CPTs manufactured in China that are implied by her model are below the corresponding price floors.”²²

I have reviewed Ms. Guerin-Calvert’s analyses, Professor Clarke’s opinions, and the translated Pricing Documents attached to Professor Clarke’s Report. I continue to conclude that my damages model is an economically reliable estimate of the classwide damages caused by the cartel.

A. The existence and level of price floors is ambiguous

In order to evaluate Ms. Guerin-Calvert’s economic analysis of implications of my damages model in the presence of Chinese government price floors, I reviewed Professor Clarke’s characterization of the price floors and the documents appended to his report, as well as Ms. Guerin-Calvert’s characterization of these materials. I reviewed these materials to inform the proper industrial characteristics under which to implement a proper economic analysis.

In general, it appears that the purpose of the regulations is to prevent “dumping” – pricing of products below cost – in order to “to protect fair, open and legitimate market competition, to maintain a normal price order, and to safeguard legitimate rights and interests of business operators and consumers.”²³ The pricing notices,²⁴ and Professor Clarke’s and Ms. Guerin-Calvert’s discussion of them, mention two production costs: (1) average industry production costs and (2) a manufacturer’s own production costs.²⁵ These two cost measures are not equal, as production costs naturally vary among manufacturers. Any individual manufacturer will have production costs above or below the industry average depending on that firm’s relative efficiency. A relatively efficient manufacturer could sell its products at prices below industry average production costs but above its own production costs.

Professor Clarke does not distinguish between these two cost measures in his report. To the contrary, he seems to conflate them when he summarizes the regulatory framework set out in the Pricing Documents attached to his report by stating that sanctions are based on a manufacturer’s prices relative to industry-average costs:

Producers are required to submit information about costs to the regulator. The regulator then issues a document containing minimum prices. The producers may not price below

²² Guerin-Calvert Supplemental Report, ¶15c, emphasis added.

²³ 1998 Notice, Article 1 in Clarke Report, Appendix 2.

²⁴ 1998 Notice, Article 1 in Clarke Report, Appendix 2 and April 1999 Notice in Clarke Report, Appendix 5.

²⁵ See, e.g.,

- 1998 Notice, Articles 4 and 5 in Clarke Report, Appendix 2, as well as April 1999 Notice, Articles 3, 4 and 10 in Clarke Report, Appendix 5 for references to firm’s own production costs.
- 1998 Notice, Articles 8, 9 and 10 in Clarke Report, Appendix 2, as well as April 1999 Notice, Articles 6, 7 and 10 in Clarke Report, Appendix 5 for references to industrial average production costs.

*those minima. If they do, they are subject to a variety of sanctions, ranging from warnings to fines to the loss of their business license.*²⁶

He then interprets the April 1999, August 2000, and September 2000 Cost Notifications, which report industry average production costs, to implement “the minimum prices for CRTs.”²⁷

Ms. Guerin-Calvert then relies on Professor Clarke’s interpretation of the Pricing Documents to assume that the relevant “price floors” come from industry-average production cost tables set by the Chinese government rather than a manufacturer’s actual costs.²⁸

Two of Professor Clarke’s Pricing Documents seem to lay out pricing guidelines, what Professor Clarke refers to as the 1998 Notice and the April 1999 Notice.²⁹ These Notices refer to industry-average production costs as constraints in principle, but only enumerate penalties when a manufacturer prices below its own production costs.

- The Notices state, “[e]x-factory prices of a manufacturing enterprise shall not be lower than the industrial average production costs in principle.”³⁰
- The Notices generally define “actions of unfair price competition” as “[e]x-factory prices of a manufacturing enterprise are lower than its [own] production costs.”³¹
- The Notices define specific actions of unfair price competition³² by making comparisons of price to a manufacturing enterprise’s own production costs.³³

²⁶ Clarke Report, ¶13.

²⁷ Clarke Report, ¶24.

²⁸ Guerin-Calvert Report, footnote 51.

²⁹ See the description of documents i. and iv. in ¶6a of the Clarke Report.

³⁰ See 1998 Notice, Article 9 in Clarke Report, Appendix 2 and April 1999 Notice, Article 6 in Clarke Report, Appendix 5.

³¹ See 1998 Notice, Article 4 in Clarke Report, Appendix 2 and April 1999 Notice, Article 3 in Clarke Report, Appendix 5.

³² The April 1999 Notice, Article 4 in Clarke Report, Appendix 5 identifies specific unfair price actions for CRT manufacturers that price below their own costs: “The following actions of color CRT and color TV operators are actions of unfair price competition: I) Ex-factory prices of a manufacturing enterprise are lower than its production costs in the same period, and sales prices of a marketing enterprise are lower than its purchasing costs in the same period; (II) Actual ex-factory prices of a manufacturing enterprise are made to be lower than its production costs, and actual sales prices of a marketing enterprise are made to be lower than its purchasing costs by means of discounts, subsidies, and offering extra quantities; (III) Sales are made at low prices by means of using raw materials and parts and components imported through smuggling, lowering performance indexes, using shoddy products as good products, reporting false costs, etc.; (IV) A color CRT buyer with relatively great advantages in market shares uses its advantageous position to force a color CRT manufacturing enterprise to sell products at prices lower than its production costs; (V) Actual ex-factory prices of a manufacturing enterprise are made to be lower than its production costs in the same period, or actual sales prices of a marketing enterprise are made to be lower than its purchasing costs in the same period by using other means.” (Emphases added.)

³³ See 1998 Notice, Article 5 in Clarke Report, Appendix 2 and April 1999 Notice, Article 4 in Clarke Report, Appendix 5.

- The Notices state that when a manufacturer sets its price below the industry average production costs, a harmed entity may notify the government and the government may open an investigation.³⁴
- The portions of the Notices that enumerate potential punishments³⁵ refer to manufacturers that violate the specifically defined actions of unfair price competition based on comparisons to a manufacturing enterprise's own production costs.³⁶

Indeed, the April 1999 Notice specifies that a firm's own production costs should be used. Industry average production costs should only be used "[w]hen it is difficult to confirm an individual cost."³⁷

I cannot offer a legal interpretation of the law, but as an economist, my reading of the Notices suggests that the relevant metric, when available, is a firm's own production costs, not industry average production costs.

To the extent that the legally-relevant Chinese price floor is defined by manufacturers' own production costs, Ms. Guerin-Calvert's analysis is incorrect, as it compares implied but-for prices to industry average production costs.

B. Ms. Guerin-Calvert's price comparisons are for BMCC, not Irico

Ms. Guerin-Calvert calculates but-for prices based on price data from the actual, cartelized world and on my overcharge estimate from my damages model. Basically, she reduced the actual prices by the amount of the overcharge. Because Irico did not produce data until recently, Ms. Guerin-Calvert did not use Irico's actual prices. Instead, all of the data used in her calculation of but-for prices of CPTs manufactured in China come from CPTs manufactured by defendant Beijing Matsushita Color CRT Co., Ltd. (BMCC), not CPTs manufactured by Irico.³⁸

Thus, Ms. Guerin-Calvert does not attempt to compare Irico's implied but-for prices to the price floor, despite the fact that the stated goal of her supplemental report is to have an "Irico focus."³⁹ If Ms. Guerin-Calvert wanted to test whether Irico's but-for prices implied by my model would subject Irico to sanctions under the Pricing Documents, she would need to compare Irico but-for

³⁴ See 1998 Notice, Article 10 in Clarke Report, Appendix 2 and April 1999 Notice, Article 7 in Clarke Report, Appendix 5.

³⁵ The April 1999 Notice, Article 9 in Clarke Report, Appendix 5 enumerates penalties for those CRT manufacturers that violate Article 4: "In the case where a reported operator of color CRTs and color TVs is found through the investigation to truly have actions of unfair price competition listed in Article 4 of the Measures, the competent government department in charge of prices shall order the operator to correct the action and impose the following punishments according to the Price Law and specific situations: (I) Issue a warning; (II) Impose a fine; (III) Order the operator to suspend business for rectification; (IV) File a request with an administration for industry and commerce for revocation of its business license."

³⁶ See 1998 Notice, Article 12 in Clarke Report, Appendix 2, and April 1999 Notice, Article 9 in Clarke Report, Appendix 5.

³⁷ See April 1999 Notice, Article 10 in Clarke Report, Appendix 5.

³⁸ MT Picture Display, 22 April 2011, Sum of US AMT(Mil), MTPD-0122906.

³⁹ Guerin-Calvert Supplemental Report, ¶¶8, 15, and 16.

prices to Irico's own contemporaneous production costs during the period in which the price floors were in effect.⁴⁰

C. Ms. Guerin-Calvert's price calculations are erroneous because they do not account for CPT shape

Ms. Guerin-Calvert compares implied but-for price of CPTs manufactured in China and compares those prices to industry-average CPT production costs for the following three size/quarter combinations: 21-inch CPTs in 1999 Q2 and 21-inch and 29-inch CPTs in 2000 Q4.

For the two size/quarter combinations for 2000 Q4 analyzed by Ms. Guerin-Calvert, the listed industry-average CPT production costs are specific to flat CPTs rather than round CPTs.⁴¹ In her calculation of prices, Ms. Guerin-Calvert ignores this distinction and calculates the implied but-for price of all CPTs of the specified size to the corresponding industry-average production costs of flat CPTs. Flat CPTs are more expensive to produce and command a higher price than round CPTs,⁴² so a proper comparison should include prices and costs only of flat CPTs.

The data underlying Ms. Guerin-Calvert's analyses do not contain information on CPT shape in 2000 Q4, and thus I cannot use these data to compare but-for prices to industry average production costs in this quarter. However, the same data do contain information on CPT shape in the following quarter, 2001 Q1. I calculate the price of flat CPTs using 2001 Q1 data and I come to the opposite conclusion as Ms. Guerin-Calvert: but-for prices implied by my model for flat CPTs are well above the industry average production costs contained in the Pricing Documents.

Table 1: Ms. Guerin-Calvert's Price Comparisons Corrected for Shape

Chinese Government Announcement Date	CPT Size	Chinese Industry-Average Production Cost	Average But-For Price of Flat CPTs Made in China 2001 Q1	But-For Price Below Chinese Industry-Average Production Cost?
9/13/2000	21-inch regular flat	\$49.52	\$77.83	No
9/13/2000	29-inch ultra flat	\$137.08	\$185.76	No

Ms. Guerin-Calvert also compares an implied but-for price for 21-inch CPTs to the industry average cost for 1999 Q2. The industry average cost does not specify whether the cost is for round, flat, or both CPTs. Some of the price data indicate 21-inch CPTs in that quarter are for round screens, but often do not indicate round or flat. That the implied non-Irico but-for price in

⁴⁰ See 1998 Notice, Article 5 in Clarke Report, Appendix 2 and April 1999 Notice, Article 4 in Clarke Report, Appendix 5.

⁴¹ Clarke Report, Appendix 9. Specifically, the costs for the 21-inch CPT is for regular flat screens and for 29-inch CPT is for ultra-flat screens.

⁴² United States International Trade Commission, May 2004, Certain Color Television Receivers from China, USITC Publication 3695, http://www.usitc.gov/publications/701_731/pub3695.pdf, accessed 17 May 2012, at I-7.

this quarter is below the industry average production cost is therefore ambiguous and may be an artifact of comparing prices and costs for different products, flat and round CPTs.

In sum, of the three quarter/size combinations for which Ms. Guerin-Calvert compares non-Irico but-for prices implied by my model to the industry-average CPT production cost published by the Chinese government, two contradict her own argument and the remaining one is ambiguous and does not clearly support her conclusion.

D. Ms. Guerin-Calvert makes sweeping generalizations based on an erroneous analysis of 0.2% of the damages model data

Ms. Guerin-Calvert compares three but-for prices to industry average production costs.⁴³ As I show above, two of these comparisons are flatly incorrect and do not support her conclusion; the remaining one is ambiguous and therefore also does not support her conclusion.

Even if all three comparisons did show but-for prices that were below industry average production costs (which they do not), and even if industry average production costs were the proper price floor, these three observations represent a miniscule share of the 850 size/quarter combinations of CPTs manufactured during the damages period or even of the 279 size/quarter combinations of CPTs manufactured in China during the damages period. In addition, neither Ms. Guerin-Calvert nor Professor Clarke make any claims regarding the existence of a Chinese price floor corresponding to the other 276 size/quarter combinations for CPT products manufactured in China available in the data used by Ms. Guerin-Calvert in this analysis.

Of the total revenue I used for my overcharge regression, the price data used by Ms. Guerin-Calvert in these three comparisons involve only 0.2% of damages period revenue.

Thus, even if accurate, Ms. Guerin-Calvert's singular observation is not sufficient to conclude that my model is not an economically sound basis for the calculation of classwide damages.

E. Summary

Even if Ms. Guerin-Calvert is using the correct price floor, her comparisons do not use Irigo prices, do not use correct prices, and represent a miniscule amount of the revenue of CPTs manufactured during the damages period (even if limited to CPTs manufactured in China). It therefore remains my opinion that my damages model is an economically sound basis for my calculation of classwide damages.

V. The assumption that horizontal communications relating to CPTs were not directed at North American customers does not change the evidence that the cartel raised prices of CPTs purchased in North America

Ms. Guerin-Calvert was "asked to assume that the horizontal communications relating to CPTs in which Irigo allegedly engaged were not directed at North American CPT customers."⁴⁴ She then concludes that "evidence that the North American CPT market differed materially from the

⁴³ The Pricing Documents have industry average costs for five size-quarters; two of those costs are for 25-inch CPTs. There are no 25-inch CPTs manufactured in China for those quarters in the data, so there are no prices to compare to the industry average costs.

⁴⁴ Guerin-Calvert Supplemental Report, ¶34.

rest of the world” and economic analyses “from previous reports” implies my damages model “does not reliably reflect the impact on IPPs of this conduct.”⁴⁵

The primary basis for Ms. Guerin-Calvert’s claims is Professor Willig’s August 5, 2014 Expert Report, which Ms. Guerin-Calvert references as the “Willig Report.” In particular, of her seven cites to Professor Willig to support her claim, six of them are to the Willig Report.⁴⁶ I explained in my September 26, 2014 Rebuttal Expert Report why Professor Willig’s claims do not change my direct overcharge conclusions. Specifically, I demonstrated that Professor Willig’s flawed arguments failed to rebut my conclusion that applying economic principles to the cartel’s conduct, together with econometric analyses of the empirical evidence, shows that the cartel did increase prices for CPTs purchased in North America.⁴⁷ I summarize below the rebuttal laid out in my Rebuttal Report.

A. The evidence supports the existence of a global cartel, impacting prices globally, including in North America

I presented economic evidence in my Expert Report that the cartel’s price-fixing impacted the U.S.⁴⁸ Further, in my Expert Rebuttal Report I explained that Defendants’ experts’ arguments that the cartel’s conspiracy to raise CPTs prices did not impact the U.S., or that the impact in the U.S. was different than the impact elsewhere, ignored or inappropriately dismissed the economic evidence and analyses in my Expert Report, namely:⁴⁹

- Defendants held numerous cartel meetings and information exchanges in North America, which would be expected to affect CPTs made and sold in North America. For example, Samsung explained that it was “meeting with North American businesses in order to find a cooperation plan related to areas of common interest, and secure communication channels to continuously maintain such relationship” and indicated Samsung’s “North American market strategy [includes c]ontinuous maintenance of mutual cooperation within market.”⁵⁰
- Defendants’ experts’ exhibits show nearly one third of all CRT TVs imported into America were from Asia and that this share increased steadily over time, with imports from Asia accounting for over 60% of CRT TVs shipped to the U.S. in 2002 and over 80% in 2006.⁵¹ This further confirms my conclusions that the cartel impacted sales in the United States.

⁴⁵ Guerin-Calvert Supplemental Report, ¶34.

⁴⁶ The seventh is a cite to Professor Willig’s Surrebuttal Report, ¶32.

⁴⁷ Netz Expert Rebuttal Report, pp. 32-47.

⁴⁸ Netz Expert Report, Section VIII.A.5, The cartel’s price-fixing impacted the U.S.

⁴⁹ Netz Expert Rebuttal Report, pp. 33-34.

⁵⁰ Im, Chul Hong, 12 January 1999, North America CPT companies meeting summary, SDCRT-0002526 -SDCRT-0002528, at 2526E and 2527E.

⁵¹ 05 August 2014, Opposition Expert Report of Lawrence Wu, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division), ¶70 and Exhibit 8.

- Defendants sold a significant number of CRTs to purchasers in the U.S. The available Defendant sales data indicate that at least \$1.028 billion of CDTs and \$13.18 billion of CPTs were shipped or billed to customers in the U.S. or Mexico in the years 1995-2007.⁵² Of that total, at least \$0.6 billion of CDTs and \$8.6 billion of CPTs were shipped or billed to U.S. customers in the years 1995-2007.⁵³ These figures understate the true value of shipments to U.S. customers because I do not have complete sales data for some Defendants and some Defendants' data do not include customer location information.
- Defendants' North American collusion was intertwined with collusive activities in Asia. For example, a meeting summary explains that, "Based on December meeting at headquarters, there was a subsequent meeting for purposes of finding grounds for cooperation within the North American market..."⁵⁴ Similarly, an LPD internal e-mail about a meeting among LPD, Samsung, and Toshiba concludes "Dear AM [Americas] and EU colleague, Please let me know if there is anything we have to talk with SDI and Toshiba at global level. We will get together comming [sic] July in Japan. And I can keep in touch with them from time to time by mail or phone."⁵⁵
- There is significant evidence that many Defendants' headquarters influenced, and even set, the prices at which their North American and other subsidiaries sold CPTs to customers. For example, in my Expert Report, I provide evidence that pricing decisions at Chunghwa's subsidiaries were controlled by headquarters in Taiwan (specifically, by C.C. Liu) for its sales to North America and other regions;⁵⁶ LG's headquarters provided price guidelines for its North American and other regional subsidiaries;⁵⁷ pricing at MTPD's North American and other regional subsidiaries was done according to business plans created by top management at headquarters;⁵⁸ and Philips had "Commercial Council Meetings" of regional CPT marketing and sales managers to discuss, among other things, pricing policies in North America and other regions.⁵⁹

This evidence all supports my conclusion that the cartel intended to and was operated to raise the prices of CRTs globally, including those consumed in North America, including the United States.

⁵² See "us_sales.txt" from my Expert Rebuttal Report backup for calculations.

⁵³ See "us_sales.txt" from my Expert Rebuttal Report backup for calculations.

⁵⁴ Im, Chul Hong, 12 January 1999, North America CPT companies meeting summary, SDCRT-0002526 - SDCRT-0002528, at 2527E, emphasis added.

⁵⁵ Philips, Lee, Phil PJ, 30 May 2002, E-mail, Subject: Information for SDI and Toshiba, PHLP-CRT-014272 - PHLP-CRT-014274, at 4273.

⁵⁶ Netz Expert Report, footnote 237.

⁵⁷ Netz Expert Report, footnote 238.

⁵⁸ Netz Expert Report, footnote 240.

⁵⁹ Netz Expert Report, footnote 242.

B. The evidence shows that the cartel's target prices increased prices to North American purchasers

Defendants used a variety of tools, including agreements to set target prices for specific CRT types, restrict output, reduce capacity, allocate customers, and exchange sensitive information on price and market conditions.⁶⁰ Despite participants' incentives to cover up collusive activity, I was able to identify target prices for approximately 29.7% of all CPTs and 13.3% of large CPTs.⁶¹

I showed in my previous reports that the target prices Defendants' set during cartel meetings exhibit an economically meaningful and statistically significant impact on the prices paid by North American direct purchasers. In particular, I demonstrated in my Rebuttal Report that:⁶²

- Defendants' target prices⁶³ exhibit an economically meaningful and statistically significant impact on the prices paid by North American direct purchasers.⁶⁴ These results are similar to the results of my regressions assessing the impact of target prices on worldwide CPT prices presented in my Expert Report.⁶⁵ In fact, the effect of target prices on the prices paid by North American purchasers is stronger than the effect on prices worldwide, as reflected in the larger coefficient estimate in the regression on North American sales.
- I performed an additional empirical analysis that confirms that the cartel's target prices impacted sales to North American purchasers. Specifically, I performed a regression analysis that estimates the effect of an index⁶⁶ of target prices on the level of actual prices paid by North American purchasers for CPTs that I was unable to match to a specific target price.⁶⁷ The index of Defendants' target prices exhibits an economically meaningful and statistically significant impact on the prices paid by North American direct purchasers for CRTs that I was unable to match to a specific target price. These results are also similar to the results of regressions assessing the impact on worldwide

⁶⁰ Netz Expert Report, Section VIII.A.5, The cartel's price-fixing impacted the U.S.

⁶¹ Netz Expert Report, p. 63 and combine_target_defendant_large_cpt.log in my Expert Rebuttal Report backup files.

⁶² Netz Expert Rebuttal Report, p. 49.

⁶³ The cartel set "target" prices for specific CRTs types and time periods. I was able to compile these targets. In some cases, I could match target prices with the prices of the same CRT type. In other cases, I did not identify a target price for a particular CRT type and time period that appeared in the transaction data. See Netz Expert Rebuttal Report, p. 49.

⁶⁴ Professor Willig claimed the contrary. His regression analysis was subject to errors. Specifically, he ran his regressions using price changes instead of price levels. Defendants set target and actual prices in dollar levels, hence, testing whether their target-price conduct affected actual prices should be done using levels. Correcting this error reverses his findings.

⁶⁵ Netz Expert Report, Section VIII.A.4.a and Exhibit 38.

⁶⁶ I used a Fisher price index, which is a method of calculating average prices that accounts for changes in the composition of target prices over time.

⁶⁷ Netz Expert Rebuttal Report, Exhibit RR-97.

CPT prices that I presented in my Expert Report.⁶⁸ The effect of the target price index on actual prices paid by North American purchasers is stronger than the effect on prices worldwide, as reflected in the larger coefficient estimate in the regression on North American sales.

Together, these results indicate that the cartel effectively raised prices to all North American purchasers, regardless of whether there is a record of Defendants setting target prices for a particular sale.

C. The evidence shows that the cartel overcharge applied to North American purchasers

Ms. Guerin-Calvert relies on analyses “from previous reports” as a basis for her contention that “the fact that horizontal communications relating to CPTs in which Irico allegedly engaged were not directed at North American CPT customers implies that [Dr. Netz’s] model does not reliably reflect the impact on IPPs on this conduct.”⁶⁹

In my Rebuttal Report, I responded to Professor Willig’s (and other Defendants’ experts’ similar) arguments that the cartel’s collusive actions did not have an impact on prices in North America, or that the impact there differed from the impact in other parts of the world.⁷⁰ With regards to the empirical analyses Ms. Guerin-Calvert cites, I previously explained:⁷¹

- Professor Willig attempted an empirical analysis of the impact to purchasers located in North America.⁷² He identified Defendants’ sales to North American purchasers and used these data to generate an estimate of the cartel overcharge specific to North American purchasers.⁷³ Professor Willig’s estimate of the overcharge indicates that North American prices were, on average, 5.14% higher during the cartel period than they would have been in the but-for world.⁷⁴ By itself, Professor Willig’s estimate is evidence that Defendants’ conduct had an impact on North American purchasers. My estimates of the worldwide CPT overcharge are based on significantly more data, which means they are more reliable

⁶⁸ Netz Expert Report, Section VIII.A.4.b.3 and Exhibit 45.

⁶⁹ Guerin-Calvert Supplemental Report, ¶34.

⁷⁰ See, e.g.,

- Rubinfeld Opposition Report, ¶¶67-90.
- Williams Opposition Report, ¶¶28-36, 41, 47-54, 140-143.
- Willig Opposition Report, ¶¶96-98.
- Wu Opposition Report, ¶¶67-84.

⁷¹ Netz Expert Rebuttal Report, p. 63.

⁷² Willig Opposition Report, ¶98.

⁷³ Willig Opposition Report, ¶98.

⁷⁴ Willig Opposition Report, ¶98.

and precise than Professor Willig's estimates of the overcharge paid by North American purchasers.⁷⁵

Irico counsel's assumption "that the horizontal communications relating to CPTs in which Irico allegedly engaged were not directed at North American CPT customers"⁷⁶ does not change my conclusions, which are based on the case evidence and reliable economic principles and analyses.

VI. The economic evidence supports my previous economic conclusions, including for Irico

None of the rebuttal arguments I made regarding North American CPTs are defendant specific. That is, my rebuttal arguments all apply equally to Irico as to other Defendants. Further, while Irico's counsel's assumptions about whether certain legal conclusions are obtained are outside of my expertise, my damages results can accommodate any such legal conclusions through simple arithmetic adjustments.

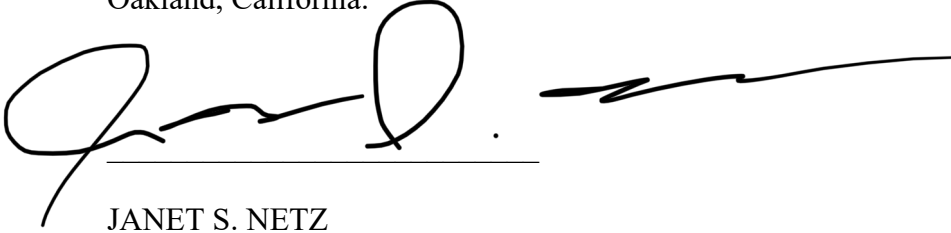
Consequently, I maintain, as I did in my September 26, 2014 Rebuttal Expert Report, that my conclusion that 22.0% and 9.0% are reasonable measures of the direct overcharge the cartel participants imposed on CDTs and CPTs, respectively, for most of the cartel period.⁷⁷

⁷⁵ My worldwide overcharge estimates incorporate data from all sources while Professor Willig is forced to discard a substantial amount of data from his NAFTA overcharge estimates because the data have incomplete customer location information. As a result, my worldwide CPT overcharge estimates are based on 2,574 observations, while Professor Willig's NAFTA estimates are based on only 1,314 observations. My estimates are based on roughly twice as many data points as Professor Willig's.

⁷⁶ Guerin-Calvert Supplemental Report, ¶34.

⁷⁷ Netz Expert Report Errata.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. This declaration was executed on the 27th day of April 2022, at Oakland, California.

A handwritten signature in black ink, appearing to read 'Janet S. Netz', is written over a horizontal line. The signature is stylized with large loops and a long horizontal stroke extending to the right.

JANET S. NETZ



Dr. Janet S. Netz

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Education

Ph.D. Economics, University of Michigan, 1992
M.A. Economics, University of Michigan, 1990
B.A. Economics, University of California at Berkeley, 1986, *cum laude*

Employment

Founder and Partner, applEcon, May 2001 to present
Visiting Associate Professor, University of Michigan, Fall 2001, Fall 2002, Fall 2003
Associate Professor, Purdue University, Fall 2001 to January 2003
Visiting Assistant Professor, University of Michigan, Winter 2001
Assistant Professor, Purdue University, Fall 1994 to Spring 2001
Assistant Professor, University of Delaware, Fall 1992 to Summer 1994

Courses Taught

Industrial Organization (undergraduate and doctoral)
Antitrust and Regulation (undergraduate)
Intermediate Microeconomics (undergraduate and master's)
Microeconomic Principles (undergraduate)
International Economics (undergraduate and master's)

Honors and Awards

Outstanding Antitrust Litigation Achievement in Economics, awarded by the American Antitrust Institute, for work In re TFT-LCD Antitrust Litigation, 2013.

Outstanding Economics Professor of the Year, Economics Club, Purdue University, 1999.

Publications

"Are All Men's College Basketball Players Exploited?", with Erin Lane and Juan Nagel, *Journal of Sports Economics*, 15(3), June 2014, 237-262.

"Price Regulation: Theory and Performance", in *Regulation and Economics*, Roger J. Van den Bergh and Alessio M. Paccas, eds., Edward Elgar Publishing, 2011.

"Sports Trivia: A Review of The Economics of Intercollegiate Sports by Randy R. Grant, John Leadley, and Zenon Zygmunt", *Journal of Economic Literature*, 47(2), June 2009, 485-489.

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"Exercising Market Power in Proprietary Aftermarkets," with Severin Borenstein and Jeffrey K. MacKie-Mason, *Journal of Economic and Management Strategy*, 9(2), Summer 2000, 157-188.

"All in the Family: Family, Income, and Labor Force Attachment", with Jon D. Haveman, *Feminist Economics*, 5(3), November 1999, 85-106.

"Why Do All Flights Leave at 8am?: Competition and Departure-Time Differentiation in Airline Markets", with Severin Borenstein, *International Journal of Industrial Organization*, 17(5), July 1999, 611-640.

"An Empirical Test of the Effect of Basis Risk on Cash Market Positions", *Journal of Futures Markets*, 16(3), May 1996, 289-312.

"The Effect of Futures Markets and Corners on Storage and Spot Price Variability", *American Journal of Agricultural Economics*, 77(1), February 1995, 182-193.

"Antitrust Policy in Aftermarkets", with Severin Borenstein and Jeffrey K. MacKie-Mason, *Antitrust Law Journal*, 63(2), Winter 1995, 455-482.

"The Economics of Customer Lock-In and Market Power in Services", with Severin Borenstein and Jeffrey K. MacKie-Mason, in *The Service Productivity and Quality Challenge*, Patrick T. Harker, ed., Kluwer Academic, 1994.

Working Papers and Work in Progress

"LCDs and Antitrust: Does Crime Pay?", with Nick Navitski and Josh Palmer

"Fantasy Football Points as a Measure of Performance", with Erin Lane and Juan Nagel

"Non-Profits and Price-Fixing: The Case of the Ivy League"

"The End of Collusion? Competition after Justice and the Ivy League and MIT Settle"

"Basis and Exchange Rate Risks and their Impact on Storage and Exports"

Research Grants

"Product Customization and Product-Space Positioning", Dauch Center for the Management of Manufacturing Enterprises, Summer 2000.

"Trade Barriers, Trade Blocs, Growth, and Convergence", Purdue Research Foundation, 1998-1999.
"Effects of Informational Asymmetry on Competition in the Residential Long Distance Calling Market", Purdue Research Foundation, 1997-1998.

"Basis and Exchange Rate Risks and their Impact on Storage and Exports", Center for International Business and Economic Research, Summer 1997.

Global Initiative Faculty Grant (Course Development), "Industrial Organization in an International Marketplace", Purdue University, Summer 1997.

"Trade, Not Aid", Purdue Research Foundation, Summer 1996.

"Trade, Not Aid", Center for International Business and Economic Research, Summer 1996.

"The Effect of Price-Fixing by Institutions of Higher Education", Purdue Research Foundation, Summer 1995.

"Applied Microeconomics/International Workshop", Purdue University, Spring 1995.

"The Market Structure of Higher Education", University of Delaware, Summer 1993.

Research Associate, Center for the Study of Futures Markets, Columbia University, 1991.

Rackham Merit Fellowship, University of Michigan, 1987-1989.

Chancellor's Scholar, University of California at Berkeley, 1983-1986.

Referee

American Economic Review
Contemporary Economic Policy
Economics Bulletin
Feminist Economics
International Journal of the Economics of Business
International Journal of Industrial Organization
Journal of Economic Education
Journal of Economic and Management Strategy
Journal of Family and Economic Issues
Journal of Futures Markets
Journal of Industrial Economics
Journal of Law and Economics
Journal of Law, Economics, and Organization
Management Science
Review of Economics and Statistics
Scandinavian Journal of Economics

Telecommunications Systems

Conference and Workshop Presentations

Panel participant, "*Apple v. Pepper*: SCOTUS Clarifies Application of *Illinois Brick*", ABA Section of Antitrust Law, May 2019.

Panel participant, "Is 'Direct' Really Correct? Bricks, Tix, Kicks, and Apps after *Apple v. Pepper*", ABA Section of Antitrust Law, Pricing Conduct and Civil Practice and Procedure Committees Program, October 2018.

Panel participant, "Will Apple's App Store Lead to the end of *Illinois Brick*", CLA Antitrust, UCL & Privacy Law Section and ABA Antitrust Section's Global Private Litigation Committee program, San Francisco, CA, July 2018.

Guest lecturer, Antitrust Law, University of San Francisco Law School, April 2017 and 2018.

Panel participant, "The Challenge of Circumstantial Proof of Cartel Behavior and of Presenting Economic Issues and Concepts to Judges and Juries", American Antitrust Institute, 10th Annual Private Enforcement Conference, Washington, DC, November 2016.

Panel participant, "Winning or Losing: Class Certification Post-Comcast", American Bar Association, 62nd Antitrust Law Spring Meeting, Washington, DC, March 2014.

Panel participant, "Preparing Early and Often", State-of-the-Art Strategies for Managing Class Action Experts, American Bar Association, 16th Annual National Institute on Class Actions, Chicago, IL, October 2012.

Panel participant, "Hot Topics Involving Experts in Antitrust Litigation", New York State Bar Association, Antitrust Law Section, Annual Meeting, New York, NY, January 2011.

Guest lecturer, Alternative Dispute Resolution Practicum, University of Michigan Law School, April 2008.

"The Economics of Indirect Purchaser Cases", State Bar of Arizona Annual Conference, Phoenix, AZ, June 2004.

"Manipulating Interface Standards as an Anti-Competitive Strategy", Standards and Public Policy Conference, Federal Reserve Bank of Chicago, Chicago, IL, May 2004.

"One-Way Standards as an Anti-Competitive Strategy", Telecommunications Policy Research Conference, Alexandria, VA, September 2002.

"Product Proliferation and Product Space Location", Econometric Society Meetings, New Orleans, January 2001.

"The End of Collusion? Competition after Justice and the Ivy League and MIT Settle", American Economics Association Meetings, New Orleans, January 2001.

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"Maximum or Minimum Differentiation? An Empirical Investigation into the Location of Firms", University of British Columbia, March 2000.

"Non-Profits and Price-Fixing: The Case of the Ivy League", University of Illinois, October 1999.

"The End of Collusion? Competition after Justice and the Ivy League and MIT Settle", Baylor University, September 1999.

"The End of Collusion? Competition after Justice and the Ivy League and MIT Settle", Western Economic Association Meetings, San Diego, July 1999.

"Non-Profits and Price-Fixing: The Case of the Ivy League", University of Chicago, April 1999.

"Non-Profits and Price-Fixing: The Case of the Ivy League", Indiana University, December 1998.

"International Integration and Growth: A Survey and Empirical Investigation", Dynamics, Economic Growth, and International Trade, III, Taiwan, August 1998.

Discussant ("Fiscal Policy and International Demand Spillovers"), Dynamics, Economic Growth, and International Trade, III, An International Conference, Taiwan, August 1998.

"International Integration and Growth", Workshop on Empirical Research in International Trade and Investment, Copenhagen, June 1998.

Discussant ("Factor Endowments and the Pattern of Affiliate Production by Multinational Enterprises," by Karolina Ekholm), Workshop on Empirical Research in International Trade and Investment, Copenhagen, June 1998.

"Non-Profits and Price-Fixing: The Case of the Ivy League", Department of Justice Antitrust Division, April 1998.

"Non-Profits and Price-Fixing: The Case of the Ivy League", American Economics Association Meetings, Chicago, January 1998.

Discussant ("Equilibrium under Satisficing," by Ralph W. Pfouts), International Atlantic Economics Society, ASSA Meetings, Chicago, January 1998.

Discussant ("Overseas Investments and Firm Exports," by Keith Head and John Ries), Fourth Annual Empirical Investigations in International Trade conference, Purdue University, November 1997.

"Maximum or Minimum Differentiation? An Empirical Investigation into the Location of Firms", International Atlantic Economic Association Conference, Philadelphia, October 1997.

Discussant ("Antidumping Enforcement in a Reciprocal Model of Dumping: Theory and Evidence," Taiji Furusawa and Thomas J. Prusa) and session chair, Third Annual Empirical Investigations in International Trade conference, Purdue University, November 1996.

"The Effect of Price-Fixing by Institutions of Higher Education", Indiana University-Purdue University Indianapolis, April 1996.

"Exercising Market Power in Proprietary Aftermarkets", with Severin Borenstein and Jeffrey K. MacKie-Mason, Indiana University - Purdue University - IUPUI First Tri-School Conference, March 1996.

"All in the Family: Family, Income, and Labor Force Attachment", with Jon D. Haveman, American Economic Association Meetings, San Francisco, January 1996.

"Family Matters: Unemployment, Wage Changes, and Mobility", with Jon D. Haveman, Southern Economics Association Meetings, New Orleans, November 1995.

Discussant and session chair, Second Annual Empirical Investigations in International Trade conference, Purdue University, November 1995.

"Competition and Anti-Competitive Behavior", ICLE (The State Bar of Michigan) Conference on Antitrust and Intellectual Property, July 1995.

"Price-Fixing, Tuition, and Financial Aid", Midwest Economics Association Meetings, Cincinnati, April 1995.

"Family Matters: Unemployment, Wage Changes, and Mobility," Midwest Economics Association Meetings, Cincinnati, April 1995.

Discussant and session chair, "Customer Discrimination, Entrepreneurial Decisions, and Investment", Midwest Economics Association Meetings, April 1995.

"An Empirical Test of the Effect of Basis Risk on Cash Market Positions", University of Illinois, Urbana-Champaign, February 1995.

Discussant and session chair, First Annual Empirical Investigations in International Trade conference, Purdue University, November 1994.

"Antitrust Policy in Aftermarkets", with Severin Borenstein and Jeffrey K. MacKie-Mason, FTC/DOJ/ABA Conference on Post-Chicago Economics, Washington, D.C., May 1994.

"The Effect of Price-Fixing by Institutions of Higher Education, University of Delaware, May 1994.

"The Effect of Futures Markets and Corners on Storage and Spot Price Variability", Purdue University, February 1994.

"An Empirical Test of the Effect of Basis Risk on Cash Market Positions", University of California at Davis, February 1993.

Discussant, Econometrics Association, Anaheim, 1992 Annual Meetings.

"Testing the Principle of Minimum Differentiation: Airline Departure-Time Crowding", Econometrics Association, Washington, D.C., 1990 Annual Meetings.

Consulting and Testifying

Automobile Antitrust Cases I and II, 2021-
Superior Court of California County of San Francisco Unlimited Jurisdiction, Case No. CJC-03-004298 and CJC-03-004303
Testifying expert for plaintiffs
Deposed September 2021

Contant v. Bank of America, 2019-
United States District Court, Southern District of New York, No. 17-cv-3139-LGS
Testifying expert for plaintiffs

Barroqueiro, et al. v. Qualcomm Incorporated, et al., 2019-
Supreme Court of British Columbia, VLC-S-S1410987
Antitrust analysis regarding various cellular phone components

Confidential client, 2018-
Antitrust analysis regarding pharmaceutical products

In re Malden Transportation, Inc. et al., v. Uber Technologies, Inc., 2018-
United States District Court, District of Massachusetts, No. 1:16-cv-12538-NGM
Testifying expert for plaintiffs

Confidential client, 2017-2018
Antitrust analysis regarding various cellular phone components

In re Automotive Parts Antitrust Litigation
United States District Court, Eastern District of Michigan Southern Division, No. 2:12-cv-02311
Testifying expert for plaintiffs

- In re Occupant Safety Systems, No. 2:12-cv-00603, 2018-
- In re Heater Control Panels, No. 2:12-cv-00403, 2018-
- In re Anti-Vibrational Rubber Parts, No. 2:13-cv-00803-MOB-MKM, 2016-
- In re Bearings, No. 2:12-cv-00500, 2016-
- In re Automotive Wire Harness Systems Antitrust Litigation, No. 12-md-00101, 2012-
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Alarm Detection Systems, Inc. v. Orland Fire Protection District, et al., 2016-2019
United States District Court, Northern District of Illinois, No. 14-cv-00876
Testifying expert for plaintiff
Deposed May 2017
Testified at trial May 2017

In re LIBOR-Based Financial Instruments Antitrust Litigation, 2016-
United States District Court, Southern District of New York, No. 1:11-md-02262-NRB
Testifying expert for plaintiffs
Deposed March 2017, June 2017

Stacey Pierce-Nunes, on behalf of herself and all others similarly situated, v. Toshiba American
Information Systems, 2015-
United States District Court, Central District of California, No. 3:14-CV-00796 JST
Testifying expert for plaintiffs
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Testifying expert for claimant
Deposed July 2015

In re Cathode Ray Tube (CRT) Antitrust Litigation, 2008-
United States District Court, Northern District of California, San Francisco Division, No. CV-07-5944-
SC
Testifying expert for plaintiffs
Deposed November 2012, March 2013, June 2014, September 2014, October 2014

In re Photochromic Lens Antitrust Litigation, 2010-2012
United States District Court Middle District of Florida, Tampa Division, No. 8:10-md-02173-JDW-EAJ
Testifying expert for plaintiffs
Deposed August 2012

Datel Holdings and Datel Design and Development v. Microsoft, 2010-2011
United States District Court, Northern District of California, San Francisco Division, No. 09-cv-05535
Testifying expert for plaintiffs
Deposed October 2011

In re Prefilled Propane Tank Marketing and Sales Practices Litigation, 2010-2011
United States District Court, Western District of Missouri, Western Division, No. 4:09-cv-00465
Testifying expert for plaintiffs

In re Florida Cement and Concrete Antitrust Litigation, 2010
United States District Court, Southern District of Florida, Miami Division, No. 1:09-cv-23493-CMA
Consulting expert for plaintiffs

Altair Engineering v. MSC Software, 2009-2010
United States District Court, Eastern District of Michigan, Southern Division, No. 2:07-cv-12807
Testifying expert for plaintiff
Deposed May 2010

In re Optical Disk Drive products Antitrust Litigation, 2009-2010
United States District Court, Northern District of California, San Francisco Division, No. M:2010-cv-02143
Consulting expert for plaintiffs

In re Flash Memory Antitrust Litigation, 2008-2011
United States District Court, Northern District of California, Oakland Division, No. C-07-0086-SBA
Testifying expert for plaintiffs
Deposed August 2009

Valassis Communications, Inc. v. News America, Inc., 2008-2009
United States District Court, Eastern District of Michigan, Southern Division, No. 2:06-cv-10240
Circuit Court of the State of Michigan, County of Wayne, No. 07-0706645-CZ
Consulting expert for plaintiff

In re TFT-LCD (Flat Panel) Antitrust Litigation, 2008-2012
United States District Court, Northern District of California, San Francisco Division, No. M:07-cv-01827
Testifying expert for plaintiffs
Deposed July 2009, June 2011, August 2011

Houston Baptist University v. NCAA, 2008-2009
United States District Court in and for the Southern District of Texas, Houston Division
Testifying expert for plaintiff

Seoul Semiconductor Co. v. Nichia Corp., 2008
United States District Court, Northern District of California, No. 3:08-cv-04932-PJH
Testifying expert for plaintiffs

Albert Andy Cohn v. Office Depot, 2008
Superior Court of the State of California, County of Los Angeles, Central District, No. BC 372449
Testifying expert for defendant

In re Graphics Processing Units Antitrust Litigation, 2007-2008
United States District Court Northern District of California, No. M:07-CV-01826-WHA
Testifying expert for plaintiffs
Deposed June 2008

Pro-Sys Consultants Ltd. and Neil Godfrey v. Microsoft, 2007-2018
Supreme Court of British Columbia, No. L043175, *Vancouver Registry*
Testifying expert for plaintiffs
Deposed December 2008

In re Dynamic Random Access Memory (DRAM) Antitrust Litigation, 2007
United States District Court, Northern District of California, No. 02-cv-01486
Consulting expert for plaintiffs

Jason White et al. v. NCAA, 2006-2008
United States District Court Central District of California, No. CV 06-0999 RGK (MANx)
Testifying expert for plaintiffs
Deposed October 2007

In re Reformulated Gasoline (RFG) Antitrust and Patent Litigation, 2004-2008
United States District Court Central District of California, No. 05-1671 CAS
Testifying expert for plaintiffs
Deposed December 2006

Carlisle, settlement negotiations with Crompton, EPDM price-fixing cartel, 2005-2007
Consulting expert

Caterpillar and Carlisle, settlement negotiations with DuPont-Dow Elastomers, PCP (or CR) and EPDM price-fixing cartels, 2004-2005
Consulting expert

City and County of San Francisco et al. v. Microsoft, 2004-2007
United States District Court for the District of Maryland, No. 1332
Testifying expert for plaintiffs

The Service Source v. Office Depot, 2004-2005
United States District Court Eastern District of Michigan Southern Division, No. 02-73361
Project director

Joe Comes et al. v. Microsoft, 2002-2008
Iowa District Court for Polk County, No. CL82311
Testifying expert for plaintiffs
Deposed July 2006, November 2006

Charles Cox et al. v. Microsoft, 2002-2006
Supreme Court of the State of New York County of New York, No. 105193/00
Testifying expert for plaintiffs

Daniel Gordon et al. v. Microsoft, 2002-2004
State of Minnesota District Court County of Hennepin Fourth Judicial District, No. 00-5994
Testifying expert for plaintiffs
Deposed September 2003

Morelock Enterprises, Inc. v. Weyerhaeuser Co., 2004-2008
United States District Court District of Oregon, No. 3:04-cv-00583-PA
Testifying expert for plaintiffs
Deposed October 2004, April 2005, October 2007
Testified in trial April 2008

Compuware v. IBM, 2002-2005
United States District Court for the Eastern District of Michigan, No. 02-70906
Project director

In re New Mexico Indirect Purchaser Microsoft Corp. Antitrust Litigation, 2002-2004
State of New Mexico First Judicial District, No. D-0101-CV-2000-1697
Testifying expert for plaintiffs

Charles Friedman et al. v. Microsoft, 2002-2004
Superior Court of the State of Arizona in and for the County of Maricopa, No. CV2000-000722 /
CV2000-005872
Testifying expert for plaintiffs
Deposed September 2003

In re Massachusetts Consumer Protection Litigation, 2003-2004
Commonwealth of Massachusetts, Superior Court Department of the Trial Court Middlesex Division,
No. 00-2456
Consulting expert

Olson v. Microsoft, 2002
Montana First Judicial District Court Lewis & Clark County, No. CDV-2000-219
Consulting expert

Covad v. Bell Atlantic (Verizon), 2001-2004
United District Court for the District of Columbia, No. 99-1046
Project director

AMD, 2000-2004
Project director

Leckrone, et al. v. Premark International, Inc., et al., 2001
Testifying expert for plaintiffs

Ren, et al. v. EMI Music Distribution, Inc., 2001
State of Michigan in the Circuit Court of the County of Macomb, No. 00-2383-CZ
Testifying expert for plaintiffs

SBC, 2000
Staff economist

Lingo et al. v. Microsoft, 1999-2004
Superior Court of the State of California City and County of San Francisco, J.C.C.P. No. 4106
Project director

Gravity et al. v. Microsoft, 1999-2003
United States District Court for the District of Columbia, No. 1:99CV00363
Staff economist

City and County of San Francisco, 1999
Staff economist

Intergraph v. Intel, 1998-2001
United States District Court Appeals for the Federal District, No. 98-1308
Staff economist

Comm-Tract v. Northern Telecom, 1991-1997
United States District Court District of Massachusetts, No. 90-13088-WF
Project director

Systemcare, Inc. v. Wang Computer, 1991-1993
United States District Court for the District of Colorado, No. 89-B-1778
Staff economist

International Travel Arrangers v. Northwest Airlines, 1988-1989
Staff economist

**Exhibit B: Documents Relied Upon in Janet S. Netz, Ph. D.
Rebuttal to Supplemental Expert Report of Margaret E. Guerin-Calvert
Part 1: Bates Numbered Documents**

CHU00030663

MTPD-0122906

PHLP-CRT-014274

SDCRT-0002528

All materials cited in the report, appendices, or backup files to the Netz Class Cert Declaration, Netz Class Cert Rebuttal, Netz Expert Report, or Netz Expert Rebuttal Report or their errata.

**Exhibit B: Documents Relied Upon in Janet S. Netz, Ph. D.
Rebuttal to Supplemental Expert Report of Margaret E. Guerin-Calvert
Part 2: Confidential Documents without Bates Numbers**

05 August 2014, Opposition Expert Report of Lawrence Wu, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Clarke, Donald, 16 March 2022, Expert Report of Donald Clarke, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Guerin-Calvert, Margaret E., 06 November 2014, Expert Surrebuttal Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Guerin-Calvert, Margaret E., 16 March 2022, Supplemental Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Guerin-Calvert, Margaret E., 21 March 2022, Errata to the Supplemental Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Guerin-Calvert, Margaret E., 23 September 2014, Errata to The Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Guerin-Calvert, Margaret E., 05 August 2014, Expert Report of Margaret E. Guerin-Calvert, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Netz, Janet S., 01 October 2012, Declaration of Janet S. Netz, Ph.D., In Support of Motion of Indirect-Purchaser Plaintiffs for Class Certification, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Netz, Janet S., 03 July 2014, Errata to the Expert Report of Janet S. Netz, Ph.D., In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Netz, Janet S., 15 April 2014, Expert Report of Janet S. Netz, PH.D, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Netz, Janet S., 15 February 2013, Rebuttal Declaration of Janet S. Netz, PH.D., in Support of Motion of Indirect-Purchaser Plaintiffs for Class Certification, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Netz, Janet S., 26 September 2014, Rebuttal Expert Report of Janet S. Netz, PH.D., In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Willig, Robert D., 05 August 2014, Expert Report of Robert D. Willig, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

Willig, Robert D., 06 November 2014, Expert Surrebuttal Report of Robert D. Willig, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

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**Exhibit C: Documents Relied Upon in Janet S. Netz, Ph. D.
Rebuttal to Supplemental Expert Report of Margaret E. Guerin-Calvert**

23 February 2022, Indirect Purchaser Plaintiffs' Objections and Responses to the IRICO Defendants' Second Set of Interrogatories, In re: Cathode Ray Tube (CRT) Antitrust Litigation (United States District Court Northern District of California San Francisco Division).

United States International Trade Commission, May 2004, Certain Color Television Receivers from China, USITC Publication 3695, http://www.USITC.gov/publications/701_731/pub3695.pdf, accessed 17 May 2012.

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